Society Proceedings

NEW YORK NEUROLOGICAL SOCIETY.

December 1, 1903.

The President, Dr. Pearce Bailey, in the Chair.

A Case of Brain Tumor with Autopsy.—Dr. William Leszynsky reported this case. The patient was a girl of nineteen, a stenographer and typewriter by occupation. She was admitted to the Eye and Ear Hospital on January 12, 1903, and was seen in consultation with Dr. H. Jarecky. She was totally blind as a result of intense papillitis. The eyeballs were slightly prominent and rigid. She had never indulged in alcoholics, but had used tea excessively. Nine months ago she had begun to suffer from unusually severe occipital headaches, generally at night while asleep. The more severe attacks were accompanied by vomiting. There had also been severe attacks of vertigo. Two months previously she suddenly became blind in the right eye, and one month later the left eye became similarly affected. She remained in the hospital about two months, during which time she complained of frequent and severe headache in the right temporal and parietal regions, associated with tonic left facial spasm. Involuntary urination occurred from time to time. There was a slight paresis of the left facial distribution. The left knee-jerk was more pronounced than the right, but ankle clonus was absent. The urine was negative. The pulse was about 78. She received a thorough course of iodide of potassium and mercurial inunction without improvement. Dr. Leszynsky's diagnosis was cerebral tumor involving the right hemisphere. The patient was admitted to his service at Lebanon Hospital on March 7, but would not consent to an exploratory operation. She could not recognize by touch any familiar object with the left hand. The convulsive attacks gradually increased in frequency, there being later clonic movements of the face, and nystagmus with retraction of the head. On May 18 there were several attacks of sudden vertigo associated with tonic and clonic spasm of the left side of the face and left arm and leg. Towards the end of May, in addition to a pronounced facial paralysis, the orbicularis palpebrarum became decidedly paretic after a few weeks. The Babinski reflex was exquisitely demonstrable on both sides. During her stay in the hospital the pulse varied between 98 and 100, the respirations were 24, and the temperature 98 to 99 degrees F. On May 30 she was admitted to the Presbyterian Hospital to the service of Dr. McCosh for operation. On June 6, while conversing with Dr. Leszynsky, she suddenly became unconscious, and the limbs were rigidly extended. Both eyes were closed, the face was pale and the pulse was regular. There were no clonic movements. After about three minutes there was complete muscular relaxation, and rapid and almost abrupt return to consciousness. On June 9, Dr. Starr concurred in the diagnosis, and thought there might be multiple lesions. Two radiographs were made, one anteroposteriorly, and the other laterally. The operation was done on June 11, 1903, under chloroform, a flap being raised over the fissure of Rolando. The intracranial pressure was found to be markedly increased. At the depth of an inch and a half, in the direction of the right lateral ventricle, cerebrospinal fluid was reached. No tumor formation was discovered. A silkworm gut drain was inserted, and after operation between one and two pints of this fluid drained away each day. Following the operation there was, for a short time, a complete left hemiplegia with rigidity. She died on July 8 from lobar pneumonia, four weeks after the operation and seventeen months after the symptoms of brain disease. The autopsy was made fifteen hours after death by Dr. George A. Tuttle. The examination was limited to the brain and its contents. The brain tissue in the region of the operation was quite soft. A soft red mass was found in the right ventricle, about the size of an egg, which apparently sprung from the inner wall of the ventricle. The tumor was thought to be a glioma. There were two organized blood clots in the ventricle. Macroscopically, all the other portions of the brain and meninges appeared to be normal.

Dr. J. F. Terriberry said that he had seen this case at the Manhattan Eye and Ear Hospital. The astereognosis was one of the most prominent symptoms at that time. The young woman had spasmodic contractions of the face muscles, first on one side and then on the other. The importance of the astereognosis as a localizing symptom had been forcibly impressed upon him by this case. If these symptoms coming from the basic area of the brain had occurred earlier, they might have led to an erroneous diagnosis.

Dr. George W. Jacoby said that the most interesting part of the report to him was the demonstration of the X-ray plates. In the skiagraphy of tumors of the brain we possessed a very valuable adjunct, but we should insist upon more precision in the description of these examinations. Over a year ago he had exhibited to this society two skiagraphs of a case of tumor of the brain, taken during life. The patient was subsequently operated upon, and the tumor removed, and the patient lived five months longer. This case proved the feasibility of obtaining skiagraphs of practical value in these cases of tumor of the brain. Oppenheim's experiments in this direction were very interesting. He had experimented with a hardened tumor in the brain and with a hardened tumor within the skull, and had succeeded admirably, but had failed on attempting to photograph brain tumors during life. Dr. Jacoby said that he had repeated these experiments, and had discovered that when soft or fresh tumors were used the result was not successful. Since that time he had made many clinical examinations on supposed brain tumors without obtaining a single positive result until the one presented by him a year ago. This experience showed that one should work with a known tube and with a known exposure to determine what would give a complete transillumination of the skull. Having done this, the minimum exposure should be used—say. 7½ or 8 minutes—and then each successive exposure should be made a little longer. In his own successful case exposures of 10½ and 11½ minutes respectively were successful, whereas longer and shorter exposures led to failure. It had been thought by some observers that the result would only be successful with a thin skull and a hard tumor, but in his own case the bones of the skull were thick and the tumor friable.

Dr. Leszynsky said that within the last two months he had examined two patients who undoubtedly had brain tumors which could not at the time be accurately localized. In each case there was astereognosis present on one side, yet when seen again the astereognosis was very variable, being present at one time and absent, perhaps, half an hour later.

Is Epilepsy a Functional Disease?—Dr. M. Allen Starr was the author of this paper.

Dr. C. L. Dana said that he was surprised that the author apparently assumed that we did not believe that epilepsy was an organic disease. At least ten years ago, the speaker said, he had spoken of epilepsy as a progressive degenerative disease of the brain, but as we did not yet know always what was this degeneration, or where it was, and could not give a morphological description of the diseased cells, it was probably wise to still describe epilepsy among diseases without definite organic basis. He also doubted if the term disease was the proper one to use in connection with epilepsy. There was certainly an underlying organic degeneration, but it seemed to him that in many cases it was rather a morbid condition than a disease process—rather a teratological defect than an actual disease. So far as we know now it was probable that the most important factor underlying epilepsy was the tendency of large groups of nerve cells to undergo a rather progressive degenerative process. With regard to the argument about Jacksonian epilepsy, he would say that the author's statements were not strictly correct. Some forms of Jacksonian epilepsy were as much without known organic basis as ordinary idiopathic epilepsy. He had had a case of Jacksonian epilepsy with classical convulsions confined to one arm and one side of the face, lasting for years, and after death a modern autopsy gave absolutely negative results. With regard to the incurability of epilepsy he would say that the stand taken by Dr. Starr seemed to him not only incorrect but disheartening and unfortunate. He knew absolutely of cases in which epilepsy had been cured. He knew personally of a young man who, at the age of seventeen, had nocturnal epilepsy for one or two years, the attacks coming as often as two or three times a month. He had seen the attacks himself, and they were perfectly characteristic. Under the bromide treatment this man recovered, and was now forty-five years of age, and had never had an attack since. There were now none of the interconvulsive symptoms of epilepsy, and this disease should be looked upon as cured just as much as a pneumonia might be considered cured. He had another patient who had been well for twenty years, and another for fifteen years. The very theory of the disease, assuming it to be organic, would make a cure possible. We knew perfectly well that there were certain degenerative processes that we could arrest; for example, tabes and degenerative processes affecting the kidneys or liver, for degenerative processes were not always progressive.

Dr. L. Pierce Clark said that Dr. Dana's statement about the curability of epilepsy had interested him, because, in an experience of ten years with epilepsy, he had records of at least two or three dozen who had remained free from epileptic attacks for periods varying from eight to twenty years. It was true that they might run eighteen or twenty years and recur again, but in such cases he would look upon them as practically cured, although the original condition might still persist. He agreed with Dr. Starr that idiopathic disease had an organic basis. He did not believe that the mere existence of an organic disease of the brain was sufficient to account even for the epilepsies of the Jacksonian type. He believed that perversions of nutrition or toxic agents were potent factors.

Dr. William Hirsch asked Dr. Starr for a definition of what he called organic or functional. From a strictly biological point of view, he thought, we could not make such a distinction between organic and functional. That a disease was organic did not by any means justify us in calling it incurable. When one made a diagnosis of paranoia, one knew it was an incurable disease, and yet it was classified all over the world as a functional disease because no one had as yet detected any organic changes in the central nervous system. The fact that Jacksonian epilepsy was frequently due to organic changes, which we recognized as such, did not prove that general epilepsy must have a change analogous to that of Jacksonian epilepsy. As Dr. Dana had pointed out, there were cases presenting quite characteristic attacks of Jacksonian epilepsy. He had in mind cases of general paresis, and particularly one case, in which death had been preceded by a very large number of these attacks, yet a careful autopsy on this patient was absolutely negative. On the other hand, there were cases of organic disease, tumors of the brain and arteriosclerosis in which epileptiform attacks never took place. We were all familiar with eclamptic attacks, attacks due to poisoning, and dependent upon transitory changes in the brain. It was manifest that all cases of epilepsy could not be said to have an organic basis.

Dr. William H. Thompson said that the function of a lamp was to give light, and for that purpose its structure might be a glass globe, a wick, and a reservoir of oil. If any portion of that structure were damaged it might interfere with its light-giving function, but this same function could be entirely abolished without in any way interfering with its mechanism, i.e., by supplying it with water or poor oil. Similarly, he conceived functional nervous diseases as derangements of the source of nerve function independent altogether of the structure of the brain—i.e., the blood. Functional disease might be so serious as to terminate life, and yet no nerve cell or fiber could be demonstrated to be diseased, the disorder perhaps having been entirely due to a toxin in the blood. He could not believe that a disease characterized so strikingly clinically by intermittency as was epilepsy could consist essentially in a structural lesion, nutritive or otherwise. He fully agreed with Dr. Starr that epilepsy was not curable by the surgeon, and, indeed, that a surgical operation upon the brain was apt to be followed by epilepsy. A polypus of the nose sometimes gave rise to an intermittent nervous trouble, asthma. He had a number of cases in which the removal of a peripheral source of irritation had been followed by a permanent disappearance of epilepsy. With regard to the true pathology of epilepsy, we were often misled in regarding epilepsy as due to a discharge in the cerebral cortex. This notion he could not reconcile with the fact that every efferent impulse was always secondary to an impulse from the afferent side. His definition of epilepsy was "a *sudden* derangement of the normal inhibition of cortical centers upon one another, dependent, in the first instance, upon an abnormal afferent impression." The majority of cases of epilepsy he believed to be the result of toxemia. That epilepsy, with such widely varying manifestations, should be dependent upon one organic disease of the brain, he could not believe.

Dr. S. F. Hallock thought if we carefully investigated the psychical side in the early history of many cases of epilepsy we would obtain a strong argument for the organic origin of the disease.

Dr. Joseph Collins said that he personally felt no urgency in putting epilepsy into the camp of organic diseases, neither did he think Dr. Starr had presented any reasons for such urgency. That we might find epilepsy to be an organic disease he hoped, and he also hoped that if such discovery were made we would find the means of coping with this disease; yet Dr. Starr seemed to take a hopelessly antagonistic view on this point. Personally, he had never been taught to look upon Jacksonian epilepsy as an organic disease, the point upon which Dr. Starr seemed to found his main argument. He supposed that about 25 per cent of the cases of idiopathic epilepsy presented Jacksonian attacks, but this phenemonon he looked upon as only an indication that the irritation proceeded from a certain portion of the brain. He understood this was Hughlings Jackson's view. He knew of no organic disease which came on in the first decennium of life and continued practically for the full natural term of life; in other words, a disease that did not cut life short. He did not know of any cases of epilepsy which had been studied in the intervals of the attack except where the observations had been interfered with by medicinal treatment to such an extent as to render these observations of no value. It had been stated this evening by several persons that changes in the brain in epilepsy had been found with a certain degree of constancy by well recognized neuropathologists. He would say that these changes were not to be compared in any way with those which occurred in the cell bodies of the neurones in a case of poisoning by bromide of potassium, administered accidentally to a patient in Toronto a year or two ago. He thought Dr. Starr must be persuaded to modify his statement regarding the incurability of epilepsy before the publication of his paper, because it would otherwise give rise to an almost immeasurable amount of despair. He did not think there was any real justification for such pessimism. Personally, he knew that cases of epilepsy did get well, or at least practically so, and he believed we were already able to cope with epilepsy with fair success.

Dr. Thomas Prout said that he had studied a good deal of pathological material sent him from the Craig Colony by Dr. L. Pierce Clark. The cases dying in status epilepticus presented a uniform lesion of the cortex. In ordinary idiopathic epilepsies he found the same lesion in the cells of the cerebral cortex, but in lesser degree, and he looked upon these changes as characteristic of epilepsy. A case reported by Wright had attracted considerable attention, but this observer's methods were exceedingly faulty. The autopsy in his reported case was made fourteen hours after death and the body temperature was 108 degrees F.

Dr. Adolph Meyer asked Dr. Starr what attitude he took concerning the fact that he founded his conclusions upon the occurrence of focal symptoms in such a large number of cases of epilepsy. What would he say with regard to the fact that the removal of such lesions failed to cure the epilepsy. The word organic as commonly used implied something far more serious than the disease as described by Dr. Starr. The persistence of the epilepsy after the removal of the organic lesion would seem to indicate that there was a general disorder present.

Dr. W. M. Leszynsky said that after a number of years of clinical experience he certainly disagreed with Dr. Starr in his pessimistic views as to the curability of epilepsy. It could hardly be doubted that a certain proportion of the cases of idiopathic epilepsy were cured. Reference was made to two cases in which the patients had promptly improved, and had been practically free from epileptic attacks for several years after the bromides had been discontinued, and proper attention had been given to the general health.

Dr. Max G. Schlapp said that it should not be forgotten that epileptiform convulsions could be produced by many different things; hence, to take a symptom or a group of symptoms and dignify them with the title "organic disease" seemed to him to be going too far. We knew that in children convulsions could be brought on easily by slight irritation of the peripheral nervous system, and to say that these convulsions were produced by an organic lesion in the central nervous system was not justified by the transitory nature of these symptoms. The difference between a Jacksonian epilepsy and an ordinary epilepsy was perhaps to be found in the position of the lesion. If the irritation were beyond the motor center it was possible that the irritation would spread throughout the cortex, giving rise to unconscious and various central disturbances. The lesions described by Dr. Prout as occurring in epilepsy were found in other conditions. The principal lesions found, according to the Nissl method, were chromatolysis, and might be present in connection with various forms of poisoning.

Dr. Edward D. Fisher said that he had long believed epilepsy was an organic disease. The fact that we could produce convulsions similar to what we understood as epilepsy, did not necessarily mean that they were really epileptic. The characteristic of epilepsy was its persistence;

it was the general mental state as well as the convulsion which constituted epilepsy. We should sharply distinguish between idiopathic epilepsy and epilepsy due to any other non-irritating cause. He did not think Dr. Starr meant to give any definite pathology for epilepsy, but merely to state that it was an organic disease. He could not agree entirely with him, however, regarding the incurability of epilepsy, although he would admit that it probably was the most nearly incurable disease known. He could not conceive of a disease which went on year after year with exactly the same symptoms as at the beginning, without there being back of it an organic lesion.

Dr. Starr closed the discussion. He said he was exceedingly obliged to the society for its full and free discussion of this important topic. He was willing that his statements about the incurability of epilepsy should not be published; nevertheless, he believed, with Dr. Fisher, that epilepsy was one of the most incurable diseases we were called upon to treat. It was true that the various speakers had spoken of one or two recoveries, yet those present must have seen hundreds of cases of epilepsy. He thought this substantiated fully the position he had taken with regard to the general incurability of epilepsy. He had had no idea of establishing a pathology for epilepsy. He certainly regarded, and believed most neurologists regarded, the Jacksonian cases as organic. The same sources of irritation which gave rise to epileptic attacks were present constantly in other individuals, and hence, there was something else in epileptics. He believed in epileptic persons there was in addition to the toxemia some underlying defect, as Dr. Dana had said. It was certainly very important to study epileptics in the intervals of the attacks, and when not under medicinal treatment; he had done this frequently, and believed it was being constantly done by others.